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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,845	02/05/2004	Jeffrey J. Allen	GP-303467	5763
7590 12/20/2005			EXAMINER	
CHRISTOPHER DEVRIES			ALI, HYDER	
General Motors Corporation			ART UNIT	
Legal Staff, Mail Code 482-C23-B21			PAPER NUMBER	
P.O. Box 300			3747	
Detroit, MI 48265-3000			DATE MAILED: 12/20/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

7/1/05

Office Action Summary	Application No. 10/772,845	Applicant(s) ALLEN ET AL.	
	Examiner HYDER ALI	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-7,10,12-14,17 and 23 is/are rejected.
- 7) ☒ Claim(s) 4,8,9,11,15,16 and 18-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 2,3,5-7,10,12-14,17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over lizuka (US 4,107,921) in view of Asada et al (US 5,562,086).

lizuka discloses the cylinder cut-off circuit 56 is supplied with signals from not only the air-fuel ratio control circuit 25 but from other suitable detector means (not shown) which are adapted to detect prescribed operational variables of the vehicle such as, for example, the vacuum developed in each or one of the branch passageways 30a

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and 30b of the air intake system 30 downstream of the throttle valve 35 or 36, the degree of opening at each or one of the throttle valves 35 and 36 and the driving torque of the output shaft (not shown) of the engine. The cylinder cut-off control circuit 56 is operatively connected to the fuel-injection system in such a manner as to interrupt the deliver of fuel from the fuel injection nozzles 21 and 22 or 23 and 24 for one pair of power cylinders 11 and 12 or the other pair of power cylinders 13 and 14 for thereby having the power cylinders 11 and 12 or 13 and 14 brought into inoperative conditions when the operational variables represented by the signals fed to the control circuit 56 are within predetermined ranges, particularly when, for example, the engine is subjected to an increased load which may be detected from an increase in the vacuum developed in each or one of the intake passageways 30a and 30b downstream of the throttle valve 35 or 36. **See column 9, lines 50-66 and column 10, lines 1-8.**

lizuka does not disclose transitioning the engine from the activated mode to the deactivated mode includes closing first throttle and opening second throttle. However, **Asada et al** discloses a control device of an engine having cylinders, which are divided into two cylinder groups. The first cylinder group is provided with a first throttle valve . The second cylinder group is provided with a second throttle valve. When shifting from full cylinder operation to partial cylinder operation , the first throttle valve is gradually opened, and the second throttle valve is gradually closed. **See abstract of the disclosure.** It would have been obvious to a person having ordinary skill in the art to modify **lizuka** by employing when shifting from full cylinder operation to partial cylinder operation, the first throttle valve is gradually opened, and the second throttle valve is

gradually closed as taught by **Asada et al** in order to close a first throttle and open a second throttle during transitioning from an activated mode to a deactivated mode of **Lizuka** engine.

Allowable Subject Matter

Claims 4,8,9,11,15,16 and 18-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 2-23 have been considered but are moot in view of the new ground(s) of rejection. **Asada et al** discloses a control device of an engine having cylinders, which are divided into two cylinder groups. The first cylinder group is provided with a first throttle valve. The second cylinder group is provided with a second throttle valve. When shifting from full cylinder operation to partial cylinder operation , the first throttle valve is gradually opened, and the second throttle valve is gradually closed. **See abstract of the disclosure**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (571) 272-4836. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY YUEN can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hyder Ali

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